

# BIOLOGICAL OBSERVATIONS, GEORGE ROCKS, NORTH-EASTERN TASMANIA

by

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## ABSTRACT

Eleven days, from 12 to 23 November 1977, were spent on and around the George Rocks group of islands off the north-east coast of Tasmania. Notes on the island vegetation, 3 species of mammals, 33 birds, 1 reptile, 18 marine fishes and some sundry invertebrate animals collected and/or observed are given.

## INTRODUCTION

George Rocks is a granite formation situated about 5 km off the north-east coast of Tasmania (lat.  $40^{\circ} 55' S.$ , long.  $148^{\circ} 19' E.$ , Fig. 1). It is comprised of three small vegetated islands and a number of exposed rocks of various sizes forming a group which is of local ornithological significance. This has resulted in visits by others on numerous occasions. Napier & Singline (in press) summarised the results of their observations between 1970 and 1977. It was proclaimed a State Reserve in 1975 and forms part of the Mount William National Park of the adjacent mainland.

Through the generosity and assistance of Mr. Trevor Singline, the present author and his son W. H. Green were able to visit the group in November 1977, living on the main island for four days (12-16 November) and spending seven days (16-23 November) aboard the fishing boat "Eastern Star" in adjacent waters. Mr. Singline's knowledge of the birds of the area has contributed greatly to the present paper and Mr. Arthur Pike of the fishing boat "Oceanites" who has fished in the area for many years and lived in a hut on George Island from October 1946 until the following winter also provided information.

## DESCRIPTION

George Island (= Main Island) is the largest of the group, being roughly circular, about 300 m across and about 30 m high. The granite rock is partly covered by sandy soil and fretted granite gravel which has built up with humus and now supports a variety of vegetation (Table 1). Three small granite beaches on the north-west, west and south sides provide good landing sites (Plate 1). The remainder of the coast is rocky and boulder strewn. Fresh water seeps and drains into rock ponds above high tide on the north-east coast providing drinking water at about three points. Tall granite outcrops give some protection from wind. (Plate 2). Occasional firing of the vegetation has reduced soil fertility and exposed the sand and gravel in many places.

Inner Island (= North-east Island) is separated from the northern shore of George Island by a deep gulch about 30 m wide. It is roughly oval in shape being about 100 m east-west by 50 m north-south. Prominent granite boulders are separated by patches of sandy soil which support some vegetation (Table 1). There is a small fresh water pond in the centre of the island. The shore is rocky and a landing is possible only in calm weather.

Bird Island is about 500 m north-west of George Rock. It is roughly oval in shape, about 100 m by 50 m and about 15 m high. It slopes gently to a small beach on the eastern side which provides a good landing site. Sandy soil, rich in humus, over much of the island supports some vegetation (Table 1). There is no evidence of firing.



Plate 1     The western side of George Island showing the granite gravel beaches. The Silver Gull and Crested Tern colonies are on the extreme right.



Plate 2     The northern end of George Island with the Tasmanian mainland in the distance.

Tugboat Island is about 1 km north of George Island and consists of two bare granite rocks about 100 m across and 15 m high. Sheltered areas above high tide provide nesting ledges but soil and vegetation are absent.

A cluster of granite pinnacles and boulders, about 100 m off the southern shore of George Island, support pigface which grows from crevices and there are numerous other outcrops, rocks and reefs, most of which are regularly washed by the sea.

## BOTANY

The vegetation of the islands is predominantly low-growing shrubs, grass and pigface (FICOIDEAE), fairly typical of that found on small offshore islands. A single Boobyalla *Acacia sophorae*, heavily wind pruned, 4 x 4 x 2 m high, growing in the centre of George Island, is the only tree in the group. A few rushes (JUNCACEAE) grow about the fresh-water soaks on the east coast of George Island.

A single small fern *Hypolepis* sp. was found growing from a rock crevice on the south-east side of George Island.

Occasional firing has removed vegetation and surface humus in patches, exposing the granite sand to erosion.

Browsing of the fine grasses by rabbits was most noticeable at the time of the visit.

A collection of plants formed during the visit and lodged in the Queen Victoria Museum herbarium is summarised in Table 1. Some undetermined grasses were also collected.

## MAMMALS

### Rabbit *Oryctolagus cuniculus*

Introduced to George Island by local fisherman about 1936 (Pike pers. comm.) where it has since persisted with a peak population of about 20 adults. Pike recalled at least one black rabbit on the island in 1946 and Singline (pers. comm.) recalled that blacks predominated about 1964. Rabbits were commonly seen during our visit, including a nest of four furred young and one about half grown but all were of normal grey pelage. Scratching and scats were prevalent and skeletal remains were numerous but excessive damage was not found. A rabbit was seen on Bird Island in 1974, severely infected with myxomatosis but rabbits do not occur there now.

### Ship Rat *Rattus rattus*

Rats, almost certainly of this species, occur on George Island. None were seen but at least one invaded the camp nightly and fed on scraps. Rat dung, the dessicated remains of a rat and the remains of storm-petrels were found beneath poa tussocks and pigface at an old hut site on the western shore. It was considered that the presence of this rat may have been responsible for mortality amongst storm-petrels and was thus a deterrent to their breeding on George Island. There was no evidence of rats on any other islands in the group. It was not present on George Island in 1946-1947 (Pike pers. comm.).

### Australian Fur Seal *Arctocephalus doriferus*

Individuals are commonly seen in the area and often trouble commercial fishermen when they are attracted to buoys and nets. Captain James Kelly found "a large number of seals" when he visited George Rocks in January 1816, taking 172 skins in nine days. He also recorded the presence of small seal pups (Kelly, 1921). The nearest present breeding colony is on Moriarty Rocks near Clark Island, about 40 km north (Green, 1973).

## BIRDS

The birds of George Rocks and the adjacent sea are summarised in Table 2. Unless otherwise stated, the following comments are based upon the author's observations, 11-24 November 1977. Nomenclature follows that of Schodde et al. (1978).

### Little Penguin *Eudyptula minor*

About 100 occupied nests were noted on George Island. These contained adults apparently ready to lay, adults with eggs, and young at various stages of development up to about three-quarters grown. Most nests with advanced young were heavily infested with fleas and other invertebrates. About 25 pairs breed on Inner Island and about ten pairs on Bird Island.

### Wandering Albatross *Diomedea exulans*

Seen only rarely by Singline (pers. comm.).

### Black-browed Albatross *Diomedea melanophrys*

A few birds were seen regularly, often coming close to the boat to take food scraps.

### Yellow-nosed Albatross *Diomedea chlororhynchos*

A few birds were seen regularly and were occasionally attracted to craypot buoys.



TABLE 1 The vegetation of the three main islands in the George Rocks group. F = few; C = common; A = abundant.

	George Island	Inner Island	Bird Island
Dicotyledons			
Caryophyllaceae			
<i>Sagina maritima</i>	—	C	C
Chenopodiaceae			
<i>Atriplex hastata</i>	—	—	C
<i>Salicornia (quinquefolia?)</i>	—	—	A
Compositae			
<i>Cirsium vulgare</i>	A	—	—
<i>Gnaphalium</i> sp.	C	—	—
<i>Senecio capillifolius</i>	—	A	A
<i>Sonchus asper</i>	C	—	—
<i>Sonchus oleraceus</i>	—	F	F
Convolvulaceae			
<i>Dichondra repens</i>	C	—	—
Crassulaceae			
<i>Crassula sieberiana</i>	C	C	—
Cruciferae			
<i>Cakile</i> sp.	C	—	—
<i>Lepidium</i> sp.	—	—	C
Epacridaceae			
<i>Leucopogon parviflorus</i>	C	—	—
Ficoideae			
<i>Carpobrotus rossii</i>	A	A	A
<i>Tetragonia implexicoma</i>	—	C	A
Geraniaceae			
<i>Pelagonium australe</i>	F	F	—
Leguminosae			
<i>Acacia sophorae</i>	F	—	—
Malvaceae			
<i>Lavatera</i> sp.	—	—	C
Primulaceae			
<i>Anagallis arvensis</i>	C	—	—
Polygonaceae			
<i>Muehlenbeckia edpressa</i>	C	—	—
Umbelliferae			
<i>Apium prostratum</i>	—	—	C
Monocotyledons			
Centrolepidaceae			
<i>Centrolepis strigosa</i>	C	—	—
Cyperaceae			
<i>Scirpus cernuus</i>	—	—	C
Gramineae			
<i>Hordeum leporinum</i>	—	C	—
<i>Poa</i> sp.	A	C	C
<i>Poa</i> sp.	C	C	C
<i>Poa</i> sp.	C	—	—
Juncaceae			
Unidentified	C	—	—
Unidentified	C	—	—
Pteridophyta			
<i>Hypolepis</i> sp.	F	—	—
<i>Microsorium diversifolium</i>	F	—	—

TABLE 2 The birds of the George Rocks group and adjacent waters discussed in the text. Approximate numerical status is indicated by F = few, < 5 sightings per day; C = common, 5-20 sightings per day; A = abundant, > 20 sightings per day; b = breeding locally; ? = not every year; \* = observed at sea. Nomenclature follows Schodde *et al.* (1978).

Species	George Island	Inner Island	Bird Island	Tugboat Island	Adjacent Seas	Napier & Singline (in press)	
						George Rocks	At Sea
Little Penguin <i>Eudyptula minor</i>	Ab	Ab	Cb		A	Cb	
Wandering Albatross <i>Diomedea exulans</i>					F		*
Black-browed Albatross <i>Diomedea melanophrys</i>					C		*
Yellow-nosed Albatross <i>Diomedea chlororhynchos</i>					C		*
Shy Albatross <i>Diomedea cauta</i>					C		*
Giant Petrel <i>Macronectes</i> sp.					F		*
Cape Petrel <i>Daption capense</i>					F		*
Fairy Prion <i>Pachyptila turtur</i>							*
Short-tailed Shearwater <i>Puffinus tenuirostris</i>	Ab				A	Cb	
White-faced Storm-petrel <i>Pelagodroma marina</i>	F		Ab		A	Cb	
Common Diving-petrel <i>Pelecanoides urinatrix</i>			Cb		A	Cb	
Australian Pelican <i>Pelecanus conspicillatus</i>					F		*
Australian Gannet <i>Morus serrator</i>					A		*
Black-faced Shag <i>Leucocarbo forbesi</i>	C	Cb?	Cb?	Ab	A	Cb	
Little Pied Cormorant <i>Phalacrocorax melanoleucos</i>					F		
Great Cormorant <i>Phalacrocorax carbo</i>	F	F	F		C		
White-faced Heron <i>Ardea novaehollandiae</i>	F					F	
Black Swan <i>Cygnus atratus</i>					C		
Pacific Black Duck <i>Anas superciliosa</i>					C		
White-bellied Sea-eagle <i>Haliaeetus leucogaster</i>					F		*
Marsh Harrier <i>Circus aeruginosus</i>	F					F	

(Table 2 continued)

Species	George Island	Inner Island	Blrd Island	Tugboat Island	Adjacent Seas	Napier & Singline (in press)	
						George Rocks	At Sea
Pied Oystercatcher <i>Haematopus longirostris</i>						F	
Sooty Oystercatcher <i>Haematopus fuliginosus</i>	Fb	Fb?	Fb			Fb	
Hooded Plover <i>Charadrius rubricollis</i>	Fb?					Fb	
Red-capped Plover <i>Charadrius ruficapillus</i>						F	
Ruddy Turnstone <i>Arenaria interpres</i>	N					N	
Eastern Curlew <i>Numenius madagascariensis</i>						F	
Arctic Jaeger <i>Stercorarius parasiticus</i>					F		*
Silver Gull <i>Larus novaehollandiae</i>	Ab	Cb	Ab?	F	A	Ab	
Pacific Gull <i>Larus pacificus</i>	F	F	Cb	F	C	Cb	
Caspian Tern <i>Hydroprogne caspia</i>			Fb		F	Fb	
Fairy Tern <i>Sterna nereis</i>					F		F
Crested Tern <i>Sterna bergii</i>	Ab		Ab?		A	Ab	
Welcome Swallow <i>Hirundo neoxena</i>	F						
Richard's Pipit <i>Anthus novaeseelandiae</i>	F					F	
Satin Flycatcher <i>Myiagra cyanoleuca</i>	F						
White-fronted Chat <i>Epthianura albilrons</i>						F	
Common Starling <i>Sturnus vulgaris</i>	F		Fb			Fb	
Forest Raven <i>Corvus tasmanicus</i>	F	F	F			F	

*Shy Albatross Diomedea cauta*

A few birds were seen regularly.

*Giant Petrel Macronektes sp.*

Singline (pers. comm.) has occasionally seen these birds.

*Cape Petrel Daption capense*

Singline (pers. comm.) has seen a few occasionally.

*Fairy Prion Pachyptila turtur*

Recorded by Napier & Singline (in press) without comment.

*Short-tailed Shearwater Puffinus tenuirostris*

A few pairs have bred annually on George Island for many years but none have been found on other islands in the group (Pike & Singline pers. comm.).

*White-faced Storm-petrel Pelagodroma marina*

Pike (pers. comm.) recalled this species breeding prolifically on the northern side of George Island about 1946. Napier & Singline (in press) found eggs there in the latter half of November. It was not found to have established nests when we left on 16 November though laying had commenced on the north-east end of Bird Island when we visited there on 15 November. Singline (pers. comm.) found about 60 nests on Bird Island in 1973 and gained the impression that this species was utilising the abandoned burrows of the much earlier breeding Diving Petrel. Observations during the present study led to the same conclusion. Predation by rats may now prevent it from breeding successfully on George Island.

*Common Diving-petrel Pelecanoides urinatrix*

First found breeding on Bird Island on 14 November 1975 when Singline (pers. comm.) estimated about 25 nests with large downy young on the eastern end and they are known to have bred there every year since. Only one large young and one adult were found on 15 November 1977.

*Australian Pelican Pelecanus conspicillatus*

One has been seen occasionally by Singline (pers. comm.).

*Australian Gannet Morus serrator*

Commonly seen throughout the area, especially so in the evenings. Congregations of up to 40 were often seen on and around Gannet Rock about 1 km to the south of George Island. Singline (pers. comm.) has seen an estimated 400 roosting at night on Victoria Rocks, east of Eddystone Lighthouse, about 10 km south of George Rocks.

The 'hawking' flight of gannets was observed as they congregated about sunset, wheeling and turning at a great height, often in loose groups.

*Black-faced Shag Leucocarbo fuscescens*

Commonly seen about George Rocks, often in dozens. Pike (pers. comm.) recalled it breeding regularly in considerable numbers on the granite pinnacles and boulders off the south shore of George Island until about 1955. Singline (pers. comm.) has found its numbers and breeding sites vary from year to year. On Tugboat Island he has seen up to 50 nests. On landing there on 16 November 1977, there were eight nests containing eggs to large young on the south-eastern rock. It also nests haphazardly on Inner Island, Bird Island and the pinnacle rocks off the southern shore of George Island. Up to 300 have been seen roosting at night on Victoria Rock (Singline pers. comm.).

*Great Cormorant Phalacrocorax carbo*

Commonly seen in the area during the visit, on some occasions up to 20 in a group. It was far more prevalent in 1977 than in former years (Singline pers. comm.).

*Little Pied Cormorant Phalacrocorax melanoleucos*

A few birds have been seen occasionally flying along the coast (Singline pers. comm.).

*White-faced Heron Ardea novaehollandiae*

A single bird has been seen occasionally on the rocky intertidal zone (Singline pers. comm.).

*Black Swan Cygnus atratus*

Up to ten have been seen occasionally flying along the coast (Singline pers. comm.).

*Cape Barren Goose Cereopsis novaehollandiae*

Captain James Kelly caught for food a number of young birds during his visit in January 1816 (Kelly, 1925). It has not been recorded there in recent years.

*Pacific Black Duck Cygnus atratus*

Up to ten have been seen occasionally flying along the coast (Singline pers. comm.).

*White-bellied Sea-eagle Haliastur leucogaster*

A single bird has been seen occasionally (Singline pers. comm.).



Marsh Harrier *Circus aeruginosus*

A single bird has been seen occasionally, hunting over the islands (Singline pers. comm.).

Pied Oystercatcher *Haematopus longirostris*

Napier & Singline (in press) recorded it as "scarce at George's Rocks".

Sooty Oystercatcher *Haematopus fuliginosus*

A pair nesting on the north-western beach of George Island hatched two young on 15 November 1977 and a pair were found with two eggs on Bird Island on the same date. Singline (pers. comm.) has found it nesting on all three vegetated islands in the group.

Hooded Plover *Charadrius rubricollis*

Singline (pers. comm.) found a pair with three eggs on the north-western beach of George Island at the end of November 1974.

Red-capped Plover *Charadrius ruficapillus*

Napier & Singline (in press) recorded it as "sometimes seen on George's Island beaches".

Ruddy Turnstone *Arenaria interpres*

About 40 were living about the intertidal zone of George Island during this survey. It no doubt visits the other islands in the group.

Eastern Curlew *Numenius madagascariensis*

Napier & Singline (in press) recorded one occurring frequently on George Island.

Arctic Jaeger *Stercorarius parasiticus*

A few birds were seen regularly, often harrying Crested Terns which were carrying small fish back to George Island from the north.

Silver Gull *Larus novaehollandiae*

Abundant throughout the area. It had just commenced to lay on the tidally-isolated rocks on the south-east end of George Island on 14 November 1977. When Bird Island was visited on 15 November 1977, about 100 were found gathered on rocks and amongst vegetation on the south-east slope. Nests were being formed but laying had not commenced.

Singline (pers. comm.) has found it changes its nesting sites from year to year but on George Island up to 150 pairs nest regularly. On Inner Island up to 150 pairs have nested in some years and none in others. It has been irregular on Bird Island with 150 nests being the maximum in any year.

Singline (pers. comm.) found it collected the fruit of *Leucopogon parvilolus* from the adjacent mainland, apparently to feed its young, the rookeries being covered with the indigestible seeds. A few plants of this species grow on George Island and Inner Island, apparently having been established there by birds transporting the fruit.

Pacific Gull *Larus pacificus*

Common throughout the area but none were found nesting. Singline (pers. comm.) has found up to eight nests in one season on Bird Island but has never found it nesting on George Island.

Casplan Tern *Hydroprogne caspia*

One pair had a nest with three newly hatched young on Bird Island on 15 November 1977. Singline (pers. comm.) has found a pair to breed there every year but has never found it nesting on George Island.

Fairy Tern *Sterna nereis*

Singline (pers. comm.) has occasionally seen it fishing in adjacent waters.

Crested Tern *Sterna bergii*

Abundant in the area. It had just commenced to lay on the south-east end of George Island on 12 November 1977. On 15 November about 250 nests with eggs were counted and about another 250 pairs were already assembled and daily adding to the extent of the colony. Copulation was observed on dozens of occasions. Many birds flew in pairs about the colony and when going to and from their feeding areas. In the evenings, they engaged in paired acrobatics, often at a great height and speed, one continuously trailing close behind the other.

Many birds were seen to return to the island carrying small fish (<100 mm). These were found to include Scad *Trachurus declivis* and Morwong *Cheilodactylus spectabilis*.

Singline (pers. comm.) first found it nesting on George Island in 1976 and estimated the colony to then contain at least 2,000 nests. Crested Terns were not nesting on George Island in 1946 but considerable numbers then bred on Bird Island and Inner Island (Pike pers. comm.). Singline (pers. comm.) has found up to 200 pairs breeding on rocks above the shore in the eastern inlet of Bird Island in some years while in other years that island is not utilised. Food gathering appears to take place to the North, possibly in the vicinity of Banks Strait.



Welcome Swallow *Hirundo neoxena*

Two were seen over George Island on 14 November 1977.

Richard's Pipit *Anthus novaeseelandiae*

Napier & Singline (in press) recorded having seen this species on George Island.

Satin Flycatcher *Myiagra cyanoleuca*

A female was seen sheltering amongst the low shrubs on George Island on 14-15 November 1977.

White-fronted Chat *Epthianura albilrons*

Napier & Singline (in press) recorded seeing it frequently on George Island.

Common Starling *Sturnus vulgaris*

Two were often seen about George Island and on the pinnacle rocks close to the southern shore. Singline (pers. comm.) has found a pair nesting in a rock crevice on the north-east end of Bird Island.

Forest Raven *Corvus tasmanicus*

One or two were seen occasionally flying over George Island.

## REPTILES

Metallic Skink *Leiopisma metallica*

Occurs commonly all over George Island.

## FISH

The following species, with number of individuals in parentheses, collected in the George Rocks area 12-13 November 1977, have been added to the Queen Victoria Museum collections.

## Alabidae

*Alabes rulus* Shore Eel (26).

## Syngnathidae

*Phyllopteryx taeniolatus* Common Seadragon (1).

## Mugilidae

*Aldrichetta forsteri* Yellow-eyed Mullet (18).

## Scorpaenidae

*Rubralga ergastulorum* Red Rock Cod (29).

*Helicolenus papillosus* Red Gurnard Perch (6).

## Carangidae

*Trachurus declivis* Scad (1).

## Girellidae

*Girella tricuspidata* Luderick (45).

## Cheilodactylidae

*Cheilodactylus spectabilis* Brown-banded Morwong (1).

## Scorpidae

*Scorpis lineolatus* Sweep (1).

## Bovichthyidae

*Bovichthus variegatus* Dragonet (24).

## Gobiidae

*Callogobius mucosus* Sculptured Goby (1).

## Blenniidae

*Pictibiennius tasmanianus* Blenny (1).

## Clinidae

*Clinus perspicillatus* Common Weedfish (33).

*Clinus puellarum* Low Head Blenny (1).

## Tripterygiidae

*Gillias macleayana* Three-fin (4).

## Labridae

*Pseudolabrus cf. celidotus* Parrot Fish (3).

## Gobiesocidae

*Creocele cardinalis* Clingfish (1).

Undetermined Clingfish (undescribed species?) (1).

## SUNDRY INVERTEBRATE ANIMALS

The following species were collected in the George Rocks area, 12-23 November 1977 and added to the Queen Victoria Museum collection. Determinations are tentative.

## Crustaceans

## Decapoda

## Palaemonidae

cf. *Leander* sp.

This prawn was found to be very common in tidal pools.

## Hippolytidae

cf. *Hippolyte* sp.

Two prawns, of different species, were collected from a tidal pool.

## Palinuridae

*Jasus lalandii* Southern Rock Lobster

Very common, also the phyllosoma larvae in considerable numbers were sometimes found on ropes and lobster pots while hauling.

## Paguridae

*Clibanarius strigimanus* Stridulating Hermit-crab

Very common, occurring in tidal pools and often hauled up in lobster pots. It was found in widely ranging sizes and occupying a variety of shells.

## Dromiidae

*Petalomera lateralis* Ridged Sponge-crab

A few were found in tidal pools.

## Majidae

cf. *Naxia* sp. Spider-crab.

A very few were found in tidal pools.

## Lithodidae

*Lomis hirta* Hairy Stone-crab.

A few were found in the tidal pools.

## Grapsidae

*Cyclograpsus audouinii* Smooth Shore-crab

Very common in the tidal pools.

*Leptograpsus variegatus* Common Shore-crab

Commonly found living in the intertidal zone. One was found feeding on an apparently freshly captured Weedfish *Clinus perspicillatus*.

*Plagusia chabrui* Cleft-fronted Shore-crab

Common in deeper water, often being hauled up in lobster pots.

## Amphipoda

## Grammaridae

cf. *Melita* spp. Two species of sea-fleas were commonly found in the tidal pools, two other species were less numerous.

## Isopoda

## Sphaeromidae

Marine Pill-lice

Rare, only five of four species being collected in the tidal pools.

## Philosciidae

A Slater *Plymophiloscia ulverstonensis* was found to be very numerous in the nesting chambers of bird burrows on Bird Island.

## Insects

## Blattodea

One species of cockroach was found to be common.

## Dermaptera

Two earwigs of one species were collected on George Island.

## Diptera

One species of fly was bred from larvae collected from the nest of a penguin.

## Hymenoptera

One parasitic wasp was collected on George Island. A series of small black ants was collected from beneath stones on George Island.

## Arachnids

### Araneida

Six spiders of three species were collected on George Island.

### False Scorpions

One pseudo scorpion was collected on George Island.

### Sea Spiders

Three pycnogonids were collected from weed hauled up on lobster pots.

## Coelenterates

### Actiniaris

One species of sea-anemone (cf. *Phlyctenanthus* sp.) was found to be common in tidal pools.

## Molluscs

### Teleoplacophora

*Cryptorplax* sp. Chiton

Common in intertidal pools.

### Fissurellidae

*Scutus antipodes* Elephant Snail.

Common in tidal pools.

### Nudibranchia

Two species were collected from tidal pools.

## Echinoderms

### Asteroidea

Five species of sea-stars were collected from tiday pools and lobster pots.

### Ophiuroidea

Two species of brittle-stars were collected from tidal pools.

### Echinoidea

Four species of sea-urchins were collected from tidal pools.

### Holothuroidea

One species of sea-cucumber was collected from tidal pools.

## ACKNOWLEDGEMENTS

I wish to thank Mr. Trevor Singline for his help and co-operation in transporting us and all our equipment to the George Rocks group, for subsequently accommodating us on his fishing boat "Eastern Star" and for readily sharing his extensive knowledge of the area. I thank also my son Bill who took leave to accompany me and who assisted with the collection and processing of material and data.

Mrs. Mary Cameron, Honorary Associate in Botany, Queen Victoria Museum, identified the botanical specimens; Mr. E. O. G. Scott, Honorary Associate in Ichthyology, Queen Victoria Museum, identified the fish; and Miss Alison J. A. Green, Tasmanian Museum, identified the terrestrial isopods. The map was drawn by Miss Judy Gadsby.

## REFERENCES

- GREEN, R. H. 1973. *The Mammals of Tasmania*. Launceston: R. H. Green.
- KELLY, James 1921. First discovery of Port Davey and Macquarie Harbour, by James Kelly. *Paps. Proc. R. Soc. Tasm.* 1920 (1921): 160-181.
- NAPIER, J. R. & T. SINGLINE in press. The Birds of George's Rocks. *Bird Watcher* (in press).
- SCHODDE, R., B. GLOVER, F. C. KINSKY, S. MARCHANT, A. R. MCGILL and S. A. PARKER 1978. Recommended English names for Australian birds. *The Emu* 77: 245-313.



